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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,389	11/19/2001	Ritsuko Kawasaki	0756-2393	8261
31780	7590	09/28/2005	EXAMINER	
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			VU, DAVID	
			ART UNIT	PAPER NUMBER
			2818	

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/988,389

Applicant(s)

KAWASAKI ET AL.

Examiner

DAVID VU

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-102 is/are pending in the application.
- 4a) Of the above claim(s) 19-24,31-42,61-66,73-84 and 97-102 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18,25-30,43-60,67-72 and 85-96 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-18, 25-30, 43-60, 67-72 and 85-96 are rejected under 35 U. S. C. 102(e) as being anticipated by Kawasaki et al. (US 6,410,368, herein after Kawasaki).

Regarding claims 1-6 and 49-54, Kawasaki discloses a method of manufacturing the semiconductor device comprising the steps of: disposing a reflecting member on a rear surface side of a substrate on which a semiconductor film is formed (col. 3, lines 46-48); irradiating a first laser beam from a front surface of the substrate; and irradiating a second laser beam from a rear surface of the substrate (col. 5, line 57 through col. 6, line 15; fig. 1), wherein the second laser beam is a part of the first laser beam which has penetrated the semiconductor film and the substrate and is reflected by the reflecting member (col. 4, lines 41-57), wherein the substrate is irradiated while relatively moving with respect to the first laser beam, the second laser beam and the reflecting member (col. 1, lines 44-50).

Regarding claims 7-12, Kawasaki discloses the surface of the reflecting member on which the first laser beam is reflected is a curved surface (col. 5, lines 1-4).

Regarding claims 13-18 and 55-60, Kawasaki discloses the wavelengths of the first laser beam and the second laser beam each are 400 nm (col. 1, lines 39-42).

Regarding claims 25-30 and 67-72, Kawasaki discloses the first laser beam is emitted from at least one selected from a YAG laser of continuous oscillation type or pulse oscillation type (col. 1, lines 39-44).

Regarding claims 43-48 and 85-90, Kawasaki discloses the first laser beam is converted into harmonic by a nonlinear optical element (col. 4, lines 12-15).

Regarding claims 91-96, Kawasaki discloses the semiconductor device is at least one selected from the group consisting of: a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable phone and a portable book (figs. 28A-29C).

2. Claims 1-18, 43-60 and 85-96 are rejected under 35 U. S. C. 102(e) as being anticipated by Kawasaki et al. (US 6,599,788, herein after Kawasaki).

Regarding claims 1-6 and 49-54, Kawasaki discloses a method of manufacturing the semiconductor device comprising the steps of: disposing a reflecting member 1004 on a rear surface side of a substrate on which a semiconductor film is formed (fig. 1); irradiating a first laser beam from a front surface of the substrate; and irradiating a second laser beam from a rear surface of the substrate (col. 4, lines 62-65), wherein the second laser beam is a part of the first laser beam which has penetrated the semiconductor film and the substrate and is reflected by the

reflecting member (col. 4, lines 30-43 and col. 5, lines 43-67), wherein the substrate is irradiated while relatively moving with respect to the first laser beam, the second laser beam and the reflecting member (col. 1, lines 41-47).

Regarding claims 7-12, Kawasaki discloses the surface of the reflecting member on which the first laser beam is reflected is a curved surface (col. 4, lines 48-61).

Regarding claims 13-18 and 55-60, Kawasaki discloses the wavelengths of the first laser beam and the second laser beam each are 400 nm (col. 1, lines 38-41).

Regarding claims 43-48 and 85-90, Kawasaki discloses the first laser beam is converted into harmonic by a nonlinear optical element (col. 1, lines 41-46).

Regarding claims 91-96, Kawasaki discloses the semiconductor device is at least one selected from the group consisting of: a personal computer, a video camera, a mobile computer, a goggle type display, a player using a recording medium, a digital camera, a projector, a portable phone and a portable book (figs. 24A-24F).

3. Claims 1-6, 13-18, 25-30, 43-60, 67-72 and 85-90 are rejected under 35 U. S. C. 102(e) as being anticipated by Kasahara et al. (US 6,744,008, herein after Kasahara).

Regarding claims 1-6 and 49-54, Kasahara discloses a method of manufacturing the semiconductor device comprising the steps of: disposing a reflecting member on a rear surface side of a substrate on which a semiconductor film is formed; irradiating a first laser beam from a front surface of the substrate; and irradiating a second laser beam from a rear surface of the substrate (col. 8, lines 59-66), wherein the second laser beam is a part of the first laser beam which has penetrated the semiconductor film and the substrate and is reflected by the reflecting

member (col. 3, lines 40-47 and col. 10, lines 4-16), wherein the substrate is irradiated while relatively moving with respect to the first laser beam, the second laser beam and the reflecting member (col. 11, lines 25-37).

Regarding claims 13-18 and 55-60, Kasahara discloses the wavelengths of the first laser beam and the second laser beam each are 1064nm (col. 4, lines 18-25).

Regarding claims 25-30 and 67-72, Kasahara discloses the first laser beam is emitted from at least one selected from the group consisting of a YAG laser, a ruby laser of continuous oscillation type or pulse oscillation type (col. 4, lines 9-25).

Regarding claims 43-48 and 85-90, Kasahara discloses the first laser beam is converted into harmonic by a nonlinear optical element (col. 4, lines 18-25).

### **Response to Arguments**

4. Applicant's arguments filed 07/19/05 have been fully considered but they are not persuasive.

5. Applicant argues that Kawasaki '788, Kawasaki '368 or Kasahara's process is not anticipatory as it does not teach the first laser beam penetrated the member to be irradiated and the substrate. However, this argument is not persuasive. Kawasaki '788 discloses the first laser light 1007 (a laser beam component 1007 which passes through the insulating film 1002 and the substrate 1001) and the second laser light 1007 (a laser beam component 1007 which is reflected by a reflecting plate 1004, passes through the substrate 1001 and the insulating film 1002, and is irradiated to the island-like semiconductor layer 1003) (col. 4, lines 38-43 and fig. 1). Kawasaki '368 discloses the first laser light 1008 (a laser beam component 1008 which passes through the

insulating film 1002/1003 and the substrate 1001) and the second laser light 1008 (a laser beam component 1008 which is reflected by a reflecting plate 1005, passes through the substrate 1001 and the insulating film 1002/1003, and is irradiated to the island-like semiconductor layer 1004) (col. 4, lines 46-52 and fig. 1). Kasahara discloses the first laser light (a laser beam component which passes through the insulating film 603 and the substrate 602) and the second laser light (a laser beam component which is reflected by a reflecting plate 601, passes through the substrate 602 and the insulating film 603, and is irradiated to the island-like semiconductor layer 604) (fig. 6 or fig. 3). As such, applicant's argument that Kawasaki '788, Kawasaki '368 or Kasahara's process fails to anticipate claims 1-18, 25-30, 43-60, 67-72 and 85-96 is not persuasive.

### **Conclusion**

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (571) 272-1798. The examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm. If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR, Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Vu

September 27, 2005.